

Applicant : Joseph S. Stam et al.
Appn. No. : 10/645,801
Page : 14

REMARKS

In response to the Official Office Action dated January 26, 2005 the Applicants offer the following remarks. Pursuant to an earlier issued restriction requirement, the Applicants have now cancelled claims 54-63 without prejudice; the Applicants reserve the right to file these claims in a divisional application. Claims 65-74 have been added via this paper, therefore, claims 1-53 and 64-74 are now pending. Claims 1, 20, 28, 40, 44, 47, 50 and 64 have been amended via this paper to more clearly define the invention being claims. Claims 9, 10, 11, 41 and 42 have been amended via this paper in response to clarity issues raised by the examiner. In no way were these amendments made to distinguish from prior art, therefore, all associated claims and claim limitations shall be construed to include all literal and equivalent structure and function.

The Applicants wish to thank the Examiner for his courtesy during a personal interview held with Applicants' representatives Mr. James E. Shultz Jr. and Mr. Brian Rees on March 24, 2005, the issues discussed during this interview are memorialized in this paper.

Turning to paragraph 2 of the Official Office Action the Examiner has objected to claim 41 under 37 C.F.R. §1.75(d)(1) as reciting features that are not supported by the remainder of the Applicants' specification. The Applicants respectfully point out that claim 41 is an originally presented claim, therefore, as discussed in MPEP §808.01(I) the Applicants may rely upon their content as forming a part of the original specification.

Turning to paragraph 3 of the Official Office Action the Examiner has rejected claims 9-12 and 41-42 under 35 U.S.C. §112, second paragraph, as being indefinite for

Applicant : Joseph S. Stam et al.
Appln. No. : 10/645,801
Page : 15

failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. The Applicants respectfully submit that the amendments made to the respective claims via this paper obviate this rejection, therefore, Applicants request that this rejection be removed.

Turning to paragraph 4 of the Official Office Action, the Examiner has rejected claims 20, 28, 36 37 and 44-53 under 35 U.S.C. §102(e) as being anticipated by U.S. Patent 6,393,133, to Breed et al. As discussed during the personal interview, the Applicants respectfully submit that Breed et al. does not teach, suggest or imply an automatic vehicular exterior light control, comprising: a controller configured to generate at least one exterior light control signal as a function of at least one probability function, wherein said at least one probability function comprises a plurality of variables and a substantially continuous output value having at least three states indicative of a probability as recited in claim 20. Therefore, Applicants respectfully submit that claim 20 is patentable over Breed et al.

Additionally as discussed during the personal interview, the Applicants respectfully submit that Breed et al. does not teach, suggest or imply an automatic vehicular exterior light control, comprising: a controller configured to generate at least one exterior light control signal as a function of at least one probability function, wherein said at least one probability function comprises a plurality of variables, a plurality of weighting factors and an output, wherein said output comprises at least three states as recited in claim 28. In that claims 36 and 37 depend from claim 28, the Applicants respectfully submit that claims 28, 36 and 37 are patentable over Breed et al.

Applicant : Joseph S. Stam et al.
Appn. No. : 10/645,801
Page : 16

Additionally as discussed during the personal interview, the Applicants respectfully submit that Breed et al. does not teach, suggest or imply an automatic vehicular exterior light control comprising a method of classifying detected light sources, said method comprising the steps of: classifying at least one detected light source with a classification network, wherein an output of said classification network is a likelihood that said detected light source is a headlamp of an oncoming vehicle or a tail lamp of a leading vehicle, wherein said output comprises at least three states as recited in claim 44. In that claims 45 and 46 depend from claim 44, the Applicants respectfully submit that claims 44-46 are patentable over Breed et al.

Additionally as discussed during the personal interview, the Applicants respectfully submit that Breed et al. does not teach, suggest or imply an automatic vehicular exterior light control comprising a method of classifying detected light sources, said method comprising the steps of: classifying at least one detected light source with a classification network, wherein said classification network determines the type of light source detected based upon at least one characteristic of at least one previously classified light source verified to be accurately classified by examining statistical data, wherein said statistical data is derived from a plurality of images containing known light sources as recited in claim 47. In that claims 48 and 49 depend from claim 47, the Applicants respectfully submit that claims 47-49 are patentable over Breed et al.

Additionally as discussed during the personal interview, the Applicants respectfully submit that Breed et al. does not teach, suggest or imply an automatic vehicular exterior light control comprising a method of classifying detected light sources,

Applicant : Joseph S. Stam et al.
Appln. No. : 10/645,801
Page : 17

said method comprising the steps of: classifying at least one detected light source with a trainable classification network, wherein said classification network is trained using at least one light source classified using expert knowledge by examining statistical data, wherein said statistical data is derived from a plurality of images containing known light sources as recited in claim 50. In that claims 51-53 depend from claim 50, the Applicants respectfully submit that claims 50-53 are patentable over Breed et al.

Turning to paragraph 5 of the Official Office Action the Examiner has rejected claims 1-9, 13-15, 17-19, 24, 25, 27, 35, 39, 40 and 42 under 35 U.S.C. §103(a) as being unpatentable over Breed et al. As discussed in the personal interview, the Applicants respectfully submit that Breed et does not teach, suggest or imply an automatic vehicular exterior light control, comprising: a controller configured to generate at least one exterior light control signal as a function of a classification network, said controller is further configured to execute a first algorithm comprising at least one second algorithm selected from the group comprising: an on state to off state transition state algorithm and an off state to on state transition state algorithm, wherein the classification network is trained using light sources classified using expert knowledge as recited in claim 1. In that claims 2 and 3 depend from claim 1, the Applicants respectfully submit that claims 1-3 are patentable over Breed et al.

Additionally, as discussed in the personal interview the Applicants respectfully submit that Breed et does not teach, suggest or imply an automatic vehicular exterior light control, comprising: a controller configured to generate at least one exterior light control signal as a function of a neural network analysis, wherein at least one output of

Applicant : Joseph S. Stam et al.
Appn. No. : 10/645,801
Page : 18

said neural network comprises at least three states as recited in claim 4. In that claims 5-9, 13-15 and 17-19 depend from claim 4, the Applicants respectfully submit that claims 4-9, 13-15 and 17-19 are patentable over Breed et al.

Additionally, in that claims 24, 25 and 27 depend from claim 20 and for at least the reasons expressed above with regard to claim 20, the Applicants respectfully submit that claims 24, 25 and 27 are patentable over Breed et al.

Additionally, in that claims 35 and 39 depend from claim 28 and for at least the reasons expressed above with regard to claim 28, the Applicants respectfully submit that claims 35 and 39 are patentable over Breed et al.

Additionally, as discussed in the personal interview the Applicants respectfully submit that Breed et does not teach, suggest or imply an automatic vehicular exterior light control, comprising: a controller configured to generate an exterior light control signal, said controller is further configured to execute a first algorithm comprising at least one second algorithm selected from the group comprising: an on state to off state transition state_algorithm and an off state to on state transition state algorithm as recited in claim 40. In that claim 42 depends from claim 40, the Applicants respectfully submit that claims 40 and 42 are patentable over Breed et al.

Turning to paragraph 6 of the Official Office Action the Examiner has rejected claims 10, 11, 16, 21, 22, 26, 29, 30 and 43 under 35 U.S.C. §103(a) as being unpatentable over the combination of Breed et al. and U.S. Patent 6,049,171, to Stam et al. In that claims 10, 11 and 16 depend from claim 4 and for at least the reasons

Applicant : Joseph S. Stam et al.
Appn. No. : 10/645,801
Page : 19

expressed above with regard to claim 4, the Applicants respectfully submit that claims 10, 11 and 16 are patentable over Breed et al. combined with Stam et al.

Additionally, in that claims 21, 22 and 26 depend from claim 20 and for at least the reasons expressed above with regard to claim 20, the Applicants respectfully submit that claims 21, 22 and 26 are patentable over Breed et al. combined with Stam et al.

Additionally, in that claims 29 and 30 depend from claim 28 and for at least the reasons expressed above with regard to claim 28, the Applicants respectfully submit that claims 29 and 30 are patentable over Breed et al. combined with Stam et al.

Additionally, in that claim 43 depends from claim 40 and for at least the reasons expressed above with regard to claim 40, the Applicants respectfully submit that claim 43 is patentable over Breed et al. combined with Stam et al.

Turning to paragraph 7 of the Official Office Action the Examiner has rejected claims 12, 23, and 31-34 under 35 U.S.C. §103(a) as being unpatentable over the combination of Breed et al., Stam et al. and U.S. Patent 5,136,507, to Shiraishi. In that claim 12 depends from claim 4 and for at least the reasons expressed above with regard to claim 4, the Applicants respectfully submit that claim 12 is patentable over the combination of Breed et al., Stam et al. and Shiraishi.

Additionally, in that claim 23 depends from claim 20 and for at least the reasons expressed above with regard to claim 20, the Applicants respectfully submit that claim 23 is patentable over the combination of Breed et al., Stam et al. and Shiraishi.

Additionally, in that claims 31-34 depend from claim 28 and for at least the reasons expressed above with regard to claim 28, the Applicants respectfully submit

Applicant : Joseph S. Stam et al.
Appln. No. : 10/645,801
Page : 20

that claims 31-34 are patentable over the combination of Breed et al., Stam et al. and Shiraishi.

Turning to paragraph 8 of the Official Office Action the Examiner has rejected claim 64 under 35 U.S.C. §103(a) as being unpatentable over the combination of Stam et al. and U.S. Patent 4,917,477, to Bechtel et al. As discussed during the personal interview, the Applicants respectfully submit that the combination of Stam et al. and Bechtel et al. do not teach, suggest or imply an automatic vehicular exterior light control, comprising: a controller configured to detect a clear condition when no other lights of other vehicles are detected within a range, wherein automatic activation of head lamps is inhibited by one or more events of the group comprising: threshold number of streetlights exceeded, threshold number of streetlights per area exceeded, steering wheel angle magnitude threshold exceeded as recited in claim 64. Therefore, Applicants respectfully submit that claim 64 is patentable over the combination of Stam et al. and Bechtel et al.

The Applicants respectfully submit that no new subject matter was added via this paper. The Applicants, therefore, respectfully submit that claims 1-53 and 64-74 are in condition for allowance. In view of the foregoing remarks, the Applicants submit that the present invention, as defined in the pending claims, is allowable over the prior art of record. The Examiner's reconsideration and timely allowance of the claims is requested. A Notice of Allowance is, therefore, respectfully solicited. Please contact the undersigned should additional information be required.

Applicant : Joseph S. Stam et al.
Appln. No. : 10/645,801
Page : 21

Respectfully submitted,

JOSEPH S. STAM ET AL.

By: Gentex Corporation

April 26, 2005
Date

J. Shultz Jr.
James E. Shultz Jr.
Registration No. 50,511
600 N. Centennial Street
Zeeland, Michigan 49464
616/772-1800